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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Matthias Pirsch

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EXAMINER

CHAPEL, DEREK S

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,350	Applicant(s) PIRSCH, MATTHIAS	
	Examiner DEREK S. CHAPEL	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status Of Claims

1. This Office Action is in response to an amendment received 6/3/2010 in which Applicant lists claims 3, 10-11 and 13 as being previously presented, claims 1-2, 4-9 and 12 as being currently amended, and claim 14 as being new. It is interpreted by the examiner that claims 1-14 are pending.

Specification

2. The amendments to the specification dated 6/3/2010 are accepted. The objections to the specification cited in the office action mailed 3/2/2010 are hereby withdrawn.

Claim Objections

3. The amendments to the claims dated 6/3/2010 are accepted. The objections to the claims cited in the office action mailed 3/2/2010 are hereby withdrawn.

Claim Rejections - 35 USC § 112

4. The amendments to the claims dated 6/3/2010 are accepted. The rejections of the claims made under 35 USC 112 second paragraph and cited in the office action mailed 3/2/2010 are hereby withdrawn.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hummel, International Publication WO 02/093232 A2, of record (hereafter Hummel, the English machine translation of which is referenced below).

7. As to claim 9, Hummel discloses a method for examining chemical or biological samples (see at least the first paragraph of the machine translation of Hummel), wherein an exit lens of an objective is arranged opposite a sample carrier for observing the sample through a sample carrier wall (see at least figure 1, elements 10, 12 and 18), wherein between an outer surface of the sample carrier wall and the exit lens of the objective a gap is defined (see at least figure 1, elements 12 and 22) such that in the gap a film of an immersion medium is arranged which is in contact with both the outer surface of the sample carrier wall and the exit lens of the objective (see at least figure 1, element 46),

wherein via a capillary channel defined in the protection means surrounding the objective as an annular gap around the exit lens (see at least figure 2, the gap formed in element 44 around element 12 to collect the immersion medium of Hummel) the immersion medium is discharged automatically, at least with the aid of capillary forces (see at least figure 1, elements 36, 50 and 48 as well as paragraphs 10-12 of page 1 and paragraphs 1-5 of page 2 of the machine translation of Hummel).

8. As to claim 10, Hummel discloses that the immersion medium is supplied automatically, at least partly with the aid of capillary forces (see at least paragraphs 10-12 of page 1 of the machine translation of Hummel).

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9. As to claim 11, Hummel discloses that the discharge of the immersion medium is adjusted relative to the supply such that the volume of the film of immersion medium essentially remains constant (see at least paragraphs 1-3 of page 2 of the machine translation of Hummel).

10. As to claim 12, Hummel discloses an objective cap (see at least figure 1, elements 10 and 44) for protecting an objective from becoming fouled by an immersion medium (see at least figure 1, element 46), comprising:

an inner collar portion adapted to be placed onto the objective (see at least figure 2, the inner collar portion of 44 and element 12),

an outer collar portion arranged around the inner collar portion (see at least figure 2, the outer collar portion of element 44), wherein the inner collar portion and the outer collar portion are at least partly spaced relative to each other such that an essentially annular capillary channel is defined (see at least figures 1 and 2, element 44), and

an outlet opening provided in the outer collar portion (see at least figures 1 and 2, element 50), via which an opening of the capillary channel is connected with a suction means (see at least paragraph 5 of page 2 of the machine translation of Hummel).

11. As to claim 13, Hummel discloses an overflow reservoir arranged in the outer collar portion for receiving the immersion medium (see at least figures 1 and 2, element 44), wherein the overflow reservoir comprises a reservoir bottom having a reservoir bottom opening via which the capillary channel is connected with the overflow reservoir for discharging immersion medium (see at least figures 1 and 2, elements 48 and 50).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 1-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hummel, International Publication WO 02/093232 A2, of record (hereafter Hummel, the English machine translation of which is referenced below) in view of Sewell, U.S. Patent Number 6,809,794 B1 (hereafter Sewell).

15. As to claims 1 and 2, Hummel discloses a device for examining chemical or biological samples (see at least the first paragraph of the machine translation of Hummel), comprising:

- a sample carrier for receiving the samples (see at least figure 1, elements 14 and 16),
- an objective for observing the samples through a sample carrier wall (see at least figure 1, elements 10, 12 and 18), wherein a gap is defined between an outer surface of

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the sample carrier wall and an exit lens of the objective (see at least figure 1, elements 12 and 22),

a film of an immersion medium to be provided in the gap such that the film is in contact with both the outer surface of the sample carrier wall and the exit lens of the objective (see at least figure 1, element 46), and

a protection means surrounding the exit lens for preventing the objective from becoming fouled by the immersion medium (see at least figure 1, element 44), wherein the protection means is connected with a suction means for discharging the immersion medium (see at least figure 1, elements 50 and 48 as well as page 2, the fifth full paragraph of the machine translation of Hummel),

wherein the protection means comprises a capillary channel connected with the suction means for discharging the immersion medium (see at least figures 1 and 2, element 44), the capillary channel having an inlet opening that is arranged annularly around the exit lens (see at least figures 1 and 2, element 50; it is noted that the capillary channel is arranged annularly around the exit lens and the inlet opening is part of the capillary channel and therefore is interpreted to be arranged annularly around the exit lens), wherein the capillary channel is essentially configured as an annular gap around the exit lens (see at least figure 2, the gap formed in element 44 around element 12 to collect the immersion medium of Hummel).

Hummel does not specifically disclose a plurality of capillary channels each having an inlet opening.

However, Sewell teaches a plurality of channels arranged annularly around an exit lens for catching immersion fluid (see at least figure 1, the two channels formed by elements 103 and 105 of Sewell).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Hummel to include the teachings of Sewell so that Hummel has a plurality of capillary channels (two channels) connected with the suction means for discharging the immersion medium, the plurality of capillary channels each having an inlet opening that is arranged annularly around the exit lens, for the purpose of providing an overflow channel for the first capillary channel to better protect the exit lens from fouling.

16. As to claim 3, Hummel in view of Sewell discloses that the protection means comprises at least two collar portions arranged around the objective and defining the capillary channel (see at least figure 2, the gap formed in element 44 around element 12 to collect the immersion medium of Hummel, the gap being formed by an outer raised “collar” portion and an inner raised “collar” portion; also see at least figure 1, the two channels formed by elements 103 and 105 of Sewell).

17. As to claim 4, Hummel in view of Sewell discloses that the protection means comprises an overflow reservoir for additionally receiving the immersion medium (see at least figures 1 and 2, element 44 of Hummel; also see at least figure 1, the two channels formed by elements 103 and 105 of Sewell).

18. As to claim 5, Hummel in view of Sewell discloses that the overflow reservoir comprises a reservoir bottom having a reservoir bottom opening via which the capillary

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channel is connected with the overflow reservoir (see at least figures 1 and 2, element 44 of Hummel).

19. As to claim 6, Hummel in view of Sewell discloses a supply means having a supply line with an outlet opening (see at least figure 1, elements 30 and 32 of Hummel), wherein the outlet opening is arranged near the exit lens of the objective so that the immersion medium is supplied into the gap at least partly with the aid of capillary forces (see at least figure 1, elements 34 and 36 as well as paragraph 12 of page 1 of the machine translation of Hummel).

20. As to claim 7, Hummel in view of Sewell discloses that the capillary channel is connected with a supply means for supplying the immersion medium (see at least figure 1, element 26 of Hummel), and the capillary channel comprises a capillary channel opening that is arranged near the exit lens so that the immersion medium is supplied into the gap at least partly with the aid of capillary forces (see at least figure 1, elements 34 and 36 as well as paragraph 12 of page 1 of the machine translation of Hummel).

21. As to claim 8, Hummel in view of Sewell discloses that the capillary channel is connected with a valve, wherein the valve is connected with the suction means and with the supply means (see at least figure 1, element 37 as well as well as paragraph 15 of page 2 of the machine translation of Hummel; it is noted that since the hose exiting the pump is fed into the valve and the discharge hose can be fed into the valve, the valve would necessarily be a 3/2 way valve).

22. As to claim 14, Hummel discloses that the inner collar portion and the outer collar portion are at least partly spaced relative to each other such that a capillary channel is

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defined (see at least figure 2, the gap formed in element 44 around element 12 to collect the immersion medium of Hummel, the gap being formed by an outer raised “collar” portion and an inner raised “collar” portion; also see at least figure 1, the two channels formed by elements 103 and 105 of Sewell), the capillary channel having an inlet opening that is arranged annularly around the exit lens (see at least figures 1 and 2, element 50; it is noted that the capillary channel is arranged annularly around the exit lens and the inlet opening is part of the capillary channel and therefore is interpreted to be arranged annularly around the exit lens).

Hummel does not specifically disclose that a plurality of capillary channels are defined.

However, Sewell teaches a plurality of channels arranged annularly around an exit lens for catching immersion fluid (see at least figure 1, the two channels formed by elements 103 and 105 of Sewell).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Hummel to include the teachings of Sewell so that Hummel has a plurality of capillary channels (two channels) arranged annularly around the exit lens, the plurality of capillary channels each having an inlet opening that is arranged annularly around the exit lens, for the purpose of providing an overflow channel for the first capillary channel to better protect the exit lens from fouling.

Response to Arguments

23. Applicant's arguments filed 6/3/2010 have been fully considered but they are not persuasive.

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24. With respect to applicant's arguments that Hummel does not disclose an inner collar and outer collar forming an annular gap and therefore a capillary channel, this argument is not persuasive. Hummel clearly shows in figure 2 a collar-shaped annular gap (44). The inner raised portion of that collar-shaped portion, near the exit lens (12), is considered to be the inner collar. The outer raised portion of the collar-shaped portion, forming the outside of element 44, is considered to be an outer collar.

Therefore, Hummel discloses a capillary channel as defined by the claims.

25. With respect to applicant's arguments that Hummel does not disclose or suggest the immersion medium being discharged automatically via a capillary channel with at least the aid of capillary forces, this argument is not persuasive. See at least figure 1, elements 36, 50 and 48 as well as paragraphs 10-12 of page 1 and paragraphs 1-5 of page 2 of the machine translation of Hummel.

26. Applicant's arguments with respect to Hummel not disclosing a plurality of capillary channels have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEREK S. CHAPEL whose telephone number is (571)272-8042. The examiner can normally be reached on M-F 10:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. S. C./
Examiner, Art Unit 2872
8/10/2010

/Stephone B. Allen/
Supervisory Patent Examiner
Art Unit 2872